# Chabanets D., Gudkova N. Kyiv National University of Technologies and Design <br> <br> PSYCHOLOGY OF COLOUR IN MODERN CLOTHING DESIGN DURING <br> <br> PSYCHOLOGY OF COLOUR IN MODERN CLOTHING DESIGN DURING THE TIMES OF MARTIAL LAW IN UKRAINE IN 2022 

 THE TIMES OF MARTIAL LAW IN UKRAINE IN 2022}


#### Abstract

The paper is devoted to the study of the impact of today's challenges, which are the long-term state of war and the psychological pressure of constant threats to the mood and aspirations of people, on the development of the design of domestic clothing. An analysis of the psychological meaning of colour in people's clothing is carried out. Characteristics of the colours such as green, khaki, grey, and blue, that are mostly used in military purposes, are provided as well as the reasons for preferring one colour over another. The dominance and popularity of clothing of a certain style and colour among the population is analyzed.


Keywords: clothing; Ukrainian design; martial law conditions; military style; psychology of colour.

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## ПСИХОЛОГІЯ КОЛЬОРУ В СУЧАСНОМУ ДИЗАЙНІ ОДЯГУ ЧАСІВ ВОЄННОГО СТАНУ В УКРАЇНІ 2022 РОКУ


#### Abstract

Анотація. Стаття присвячена дослідженню впливу викликів сьогодення, якими є довготривалий воєнний стан та психологічний тиск постійних загроз на настрій та прагнення людей, на розвиток дизайну вітчизняного одягу. Проведено аналіз психологічного значення кольору в одязі людей. Наведено характеристики зеленого, хакі, сірого та синього кольорів, які переважно використовуються у військових иілях, а також причини переваги одного кольору над іншим. Проаналізовано домінування та популярність серед населення одягу певного стилю та кольору.


Ключові слова: одяг; украӥнський дизайн; умови воєнного стану; стиль мілітарі; психологія кольору.

Introduction. The psychology of fashion is a much deeper concept than it could be imagined. Clothes are not just protection from the cold, but also a very accurate relay of a person's state of mind. The psychology of colour in clothes defines the choice of a particular colour from two points of view: the internal state of a person, which leads to the intuitive choice, and the impression that the individual wants to make on others, which can be characterized as a conscious choice. Most often, people subconsciously choose the colour of clothes, depending on the psychological state caused by various troubles. It can be troubles at work, frequent conflicts in the family, emotional turmoil of a person who has not found himself in this life, or the war.

Analysis of recent research and publications. The study of various design and product development related technologies, and applications of these technologies in fashion is among the research interests of scientist and researches (Calderin \& Volpintesta, 2013; Xu, 2015; Cassidy \& Goswami, 2017; Lee, 2022). The research into the psychological factors influencing the process of the development of design, including colour as one of such a factor, has been in the focus of many authors' attention and the subject of numerous publications (Cialdini, 2009; Gudkova, 2016; Mair, 2018; Soares \& Rebelo, 2022). There are works which are devoted to the analysis design as a phenomenon, manufacture and application of military textiles and transformation of military clothing into popular retail fashion (Wilusz, 2008; Sparks, 2012; Godbold, 2016). At the same time, there are currently critically few independent scientific works devoted to the researched issue.

The aim of research is to contribute to the formation of scientific and theoretical bases for the development of clothing design, taking into account the psychological theories of colour,
the psychology of the influence on the human brain and preferences, the external factors, such as the state of war, uncertainty in the environment and challenges related to constantly active risk situations.

Results of the investigate. From the time of Aristotle, colour was defined as a special substance, or as a type of light. Later colours were defined as sensations caused by light falling on a certain object, perceived by the eye and transmitted to the human brain. The definition of colour as a result of the dispersion of light, due to Newton's discovery of chromatic scale (spectrum) in the 17th century, became an important milestone in the development of world science and technology (Федоренко \& Чабанець, 2022).

A person does not always think about the role of colours in his life, as well as about their origin. In this aspect the scientific work of Johann Wolfgang von Goethe is still relevant today (Goethe, 1840). Goethe had worked on his "Theory of Colours" for 20 years. The main value of this work lies in the formulation of subtle psychological states associated with the perception of contrasting colour combinations. He sought the principle of colour harmonization not in physical laws, but in the regularities of colour vision. Goethe's colored circle symbolizes the human mind and the life of the soul. Goethe singled out physiological and psychological types of influence of colour on a person. The first one deals with human body, the second one lies in the sphere of human's spiritual world. It was Goethe who the first proposed a clear system describing the influence of various colour impressions on the human psyche. In each pair of contrasting colours, the entire colour wheel is already enclosed, because their sum, white color, can be decomposed into all possible colours and contains them in potential. From this follows the most important law of the activity of the organ of vision - the law of the necessary change of impressions. When the eye is offered dark, it demands light; it demands the dark when the light is presented to it, and reveals its vitality, its right to grasp the object by giving rise to something opposite to the object (Goethe, 1840). Newton's teaching is based on the idea of the combined nature of light, which contains colours. Newton determined the colour by mathematical and quantitative characteristics: from 400 to 800 billion vibrations of a particle per second. Goethe proceeded precisely from the objects of sensual contemplation. He was interested in everything, up to the sensory and moral effects of colour. Goethe's experiments with coloured shadows showed that diametrically opposite (complementary) colours are precisely those that mutually evoke each other in the mind of the viewer. Yellow requires blueviolet, orange requires blue, and magenta requires green, and vice versa.

Goethe believed that colour affects a person's state of mind. Therefore, he assigned certain psychological states of a person to certain colours. He divided colours into positive (yellow, orange, red), which create a lively and cheerful mood, and negative (blue, red-blue), which create a restless and melancholy mood. Green was considered by him to be a neutral colour.

The principle of social proof, which is considered by Robert B. Cialdini, arises from uncertainty under one condition (Cialdini, 2009). Undoubtedly, when people feel insecure, they look more to the actions of others to decide how to act themselves. In addition, the similarity factor is extremely important. The principle of social proof works best when we observe the actions of people like ourselves. It is behaviour that has a lot to do with us that gives us the best insight into what behavior is right for us. Advertisers know that in order to sell a product to many ordinary people, it is necessary to show them that other ordinary people really like this product and are willing to use it.

The psychology of clothes can be exploited in order to manipulate the mood of the public and to form the necessary point of view. This technique is regularly used by public people, who pay a lot of attention to their wardrobe.

Coloures in clothing used by designers and the choice of colours by customers depends on the mood in society, political situation in the country and country development vector. Before the start of hostilities on the territory of Ukraine, calm, gentle colours were popular, and most often clothes were plain. Gentle lavender, coral, light yellow indicated harmony and peace. However, at present, the war has changed the view of fashion, so military clothing has rapidly become popular among the non-military population of Ukraine. In spite the fact, that the wearing of military uniforms with the insignia of military personnel in Ukraine has been prohibited by law since 2019 (Закон України № 2747-VIII від 06.06.2019), over the past six months, olive-coloured clothing with the signature pixel of the Armed Forces, or with pseudo-chevrons or patches with a blood group, or just camouflage-coloured clothing can be seen on civilians (Picture 1).


Picture 1. Camouflage-coloured clothing can be seen on civilians (Чаплигіна, 2022)
During the legal regime of martial law, civilians are prohibited from wearing not only military uniforms, but also any other uniform or clothing that resembles military and may mislead. But people gravitate towards choosing a military uniform or its elements in everyday life, because it is similar to the desire to be involved in the ZSU community. In order not to violate the requirements of the law regarding the wearing of military clothing, the fashion industry has developed a military style. It is a kind of trend, which demonstrates the peculiarities of the military direction in clothing, embodying the stereotypes and characteristics of the uniforms of military personnel in women's and men's fashion (Picture 2, Picture 3). A distinctive feature of militarystyle clothing is the versatility of its use, as it effectively performs all intended functions. The undeniable advantages of the military uniform make it convenient for sports and tourism. Camouflage and military uniforms are made from special tactical fabrics.


Picture 2. Military style in women's fashion (Що таке мілітарі стиль, приклади образів в стилі мілітарі, 2022)


Picture 3. Military style in men's fashion (Стиль мілітарі в одязі, 2022)

The military style is expressed not only in imitation of military uniforms, but also in the use of military colours in clothes of non-military cut (Picture 4). The colour scheme is often the defining stylistic of the military in the image, especially when it comes to clothes with a minimum of signs of a military theme. The basis of the wardrobe is all dull and muted shades of green (dark green, olive, swamp), black, khaki, grey, lactic, dark blue denim.


Picture 4. Military colours in clothes of non-military cut (Осінь кольору хакі: з чим носити жіночі черевики модного кольору, 2022)

Basic military colours such as green, grey, blue and black have specific psychological characteristics. The psychology of colours have been of great interest since early times and nowadays is still popular among those whose activity closely correlates with the phenomenon of colour. The idea of the potential of colour as a tool of influence on human consciousness has changed over time.

Green. According to Goethe, if yellow and blue are mixed in equal proportions, then green is obtained. Our eye finds real satisfaction in green, the eye and soul rest. Therefore, for rooms in which you are constantly located, green wallpapers are usually chosen. Green is the most soothing colour. It is associated with greenery, coolness and nature. This is the color of indifferent calm: it does not convey joy, sadness or passion. When something becomes green, it gives rise to hope for a renewed life. Green, tending to yellow, is gaining active and solar power; if it is dominated by blue, it becomes more sober and refined. From the point of view of modern scientists, green symbolizes perseverance and hardness. The choice of green clothes speaks of a person's desire for stability, his desire to assert himself. At the same time, lovers of green subconsciously want to be liked by others, they lack social recognition.

Grey. Goethe stated that grey is the center of everything, but it is a neutral and passive center, symbolizing indecision and lack of energy, expressing doubt and melancholy. Metallic colours have a brilliant appearance, taking on the qualities of the metals they represent. They give the impression of metallic coldness, give a feeling of brilliance, luxury, elegance due to their association with wealth and precious metals. Imitation must evoke the main image of value, otherwise it will lead to a counterproductive effect and give the impression of a fake, a trinket. As to the modern interpretation of grey, it is a neutral colour, it is the color of insecurity, secrecy, closedness. Often, people who choose grey in their clothes like to be inconspicuous
and stay in the shadows. This neutral color is considered by those who do not dare to loudly declare themselves.

Khaki. This colour is obtained by mixing grey or light brown with green. Having greenish appearance, this colour is preferable for people who feel the need for defense, protection or masking. This colour helps hide a person, merging him with the landscape. Brighter shades of the this colour often cause negative associations, such as sad green, swamp mud or just swamp.

Blue. After numerous experiences Goethe proved that blue has a strange and almost indescribable effect on the eyes. Blue always carries with it something dark. It combines a kind of contradiction of excitement and calmness. The blue surface seems to be from us. We willingly look at blue because it draws us. Blue evokes a feeling of coldness in us, just as it reminds us of shadows. Rooms decorated in pure blue seem somewhat spacious, but, in fact, are empty and cold. Being a symbol of depth, it is intangible and cold. The sense of calmness that blue evokes is different from the earthy calmness or tranquility of green. It is a restrained colour and is included in cold colours. It expresses harmony, friendship, loyalty, serenity, calm and creates the optical illusion of return. This colour is associated with the sky, sea and air. The more it lightens, the more indifferent and empty it becomes. The darker it gets, the more it attracts to infinity. In modern interpretation of fashion designers, the blue colour indicates conservatism and adherence to one's ideals. If blue prevails in the clothes, then it can be said about the person that he/she will be a loyal friend, although somewhat independent. This is the color of harmonious, calm people.

Black. This colour was defined by Goethe as nothing, subconsciousness and destruction. In modern clothing design this colour is used to mean silence, independence, isolation and stubbornness. Black pushes to violate prohibitions and to challenge. It is the color of extremists, rebels, power and mourning. Rockers, punk and representatives of other subcultures choose this colour as a symbol of the denial of social values.

Conclusion. Colour has a great inner meaning and its choice depends on the inner state of a person, on his mood, on the surrounding environment, on the impression that an individual wants to make on another. In the conditions of war, the choice of the colour of clothing is determined by a kind of trend, the desire to be involved in the community of the Armed Forces, because the colour scheme used in military clothing is characterized by the desire for the need for protection, or camouflage, diverting attention to one's person. Ukrainian designers and ordinary people react to the situation in the country, and therefore the dominant colours in the clothes of this period are green, khaki, grey, blue, and black. Thus, people express support for the military, which protects us from enemies, this is a manifestation of patriotism and unity of the people.

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